



# **Patient Safety and the Federal Research Agenda**

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# National Federal Patient Safety: Background

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- IOM's report: To Err is Human (Nov. 1999)
- Systems-related best practices RFA (Dec. 1999)
- QuIC (Quality Interagency Coordination Task Force)
  - Doing What Counts for Patient Safety: Federal Actions to Reduce Medical Errors and Their Impact (Feb. 2000)
- Patient Safety Task Force (March 2001)

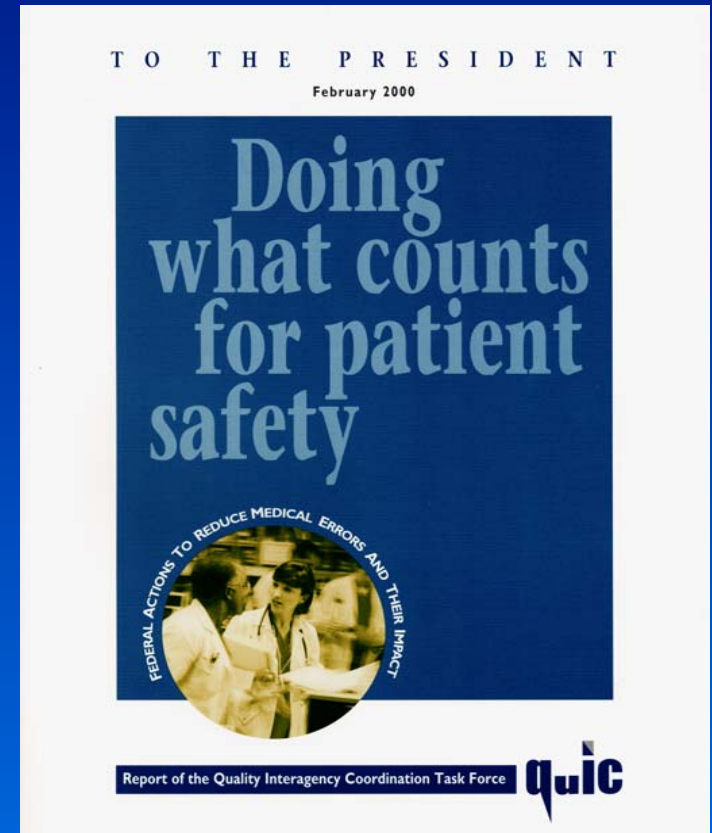
# Systems Related Best Practices

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- 6 grants
- Diverse focus
  - Improving Safety by Computerizing Outpatient Prescribing (Bates)
  - Reducing Missed Diagnoses of Acute Cardiac Ischemia in the ED Using the ACI-TIPI Error Reduction System (Selker)
  - Teamwork and Error in Neonatal Intensive Care (Thomas)
  - Characterizing Medical Error in Primary Care (Woolf)
  - Brief Risky High Benefit Procedures Best Practice Model (Mackenzie)
  - Developing Best Practices for Patient Safety and The California Patient Safety Consortium (Singer/formerly McClellan)

# QuIC

- *Doing What Counts...*  
(Available at [www.quic.gov](http://www.quic.gov))
- 100+ action items (85% completed as of 2002)





Quality Interagency Coordination Task Force

September 11, 2000  
8:30 a.m. to 5:00 p.m.

J.W. Marriott Hotel  
Washington, D.C.

**National  
Summit  
on  
Medical Errors  
and  
Patient Safety  
Research**

**Setting a  
Research Agenda  
for  
Reducing Errors**

*Sponsored by the*  
Quality Interagency Coordination Task Force

*With participation from:*  
Aetna-U.S. Healthcare  
Agency for Healthcare Research and Quality  
California HealthCare Foundation  
Centers for Disease Control and Prevention  
The Commonwealth Fund  
Department of Defense  
Department of Veterans Affairs  
Grantmakers in Health  
Health Care Financing Administration  
Henry J. Kaiser Family Foundation  
Jewish Healthcare Foundation  
National Patient Safety Foundation  
Premier Health Care Systems  
Robert Wood Johnson Foundation  
National Health Service (U.K.)  
New South Wales Council for Quality in Healthcare  
New Zealand Ministry of Health

- **September 2000**
- **Joint public and private sector funder participation and support**
- **Input from over 100 stakeholders**
- **Oral testimony from 25 groups**
- **Written statements from 71**
- **Follow up meeting with clinicians (Nov. 2000)**





# QulC National Summit on Medical Errors and Patient Safety Research

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- Research agenda ([www.quic.gov](http://www.quic.gov))
  - Epidemiology of errors
  - Infrastructure to improve patient safety
  - Information systems
  - Knowing which interventions should be adopted
  - Using information
  - Transition issues
- Used in driving the \$50 million 2001 AHRQ portfolio of patient safety grants



# AHRQ FY 2001 Patient Safety RFAs

## \$50 million

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- ✓ 1) Health System Error Reporting, Analysis, and Safety Improvement Demonstrations
- ✓ 2) Centers of Excellence for Patient Safety Research and Practice
- ✓ 3) Developing Centers for Patient Safety Research and Practice
- ✓ 4) Clinical Informatics to Promote Patient Safety (CLIPS)
- ✓ 5) Effect of Working Conditions on Patient Safety
- ✓ 6) Patient Safety Research Dissemination and Education

# Evaluating Reporting Demonstration Projects

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- What information should be collected? How? How can the data be used to improve safety?
  - 16 demonstration projects awarded totaling \$24.7 million to examine data collection, analysis and use
    - Voluntary reporting
    - Required reporting
    - Required reporting that includes reporting to the affected patient or family member
  - Includes projects to look at changes in information systems to improve data collection
  - Examines some state-based systems



# Reporting Demonstration Projects: Preliminary Findings

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- No single data source is sufficient to gain a complete understanding of medical errors contributing to actual or potential patient harm
- As reporting improves
  - Number of reported errors are expected to increase
  - Severity of errors is expected to decrease
- Great variability in whether and how errors are disclosed despite JCAHO standard requiring disclosure of all unexpected outcomes of care

# Reporting Demonstration Projects: Preliminary Findings

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- Human resource policies/procedures should be aligned with the emerging “just culture”
- Legal protection of reporters/reported data is critical
- Ability to identify patient safety problems would be enhanced by the availability of data guidelines and standards
- Reporting systems must be easy to use but not too simple

# Reporting Demonstration Projects: Preliminary Findings

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- Most common root causes of medical errors
  - Communication problems
  - Inadequate information flow
  - Human problems
  - Patient-related issues
  - Organizational transfer of knowledge
  - Staffing patterns/work flow
  - Technical failures
  - Inadequate policies/procedures

# Centers of Excellence

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- Purpose: support multidisciplinary research teams to build the knowledge base on patient safety
- 3 awards
  - Improving medication practices across clinical settings
  - Reducing medication errors
  - Translating safety practices from aviation

# Developing and Encouraging Centers of Excellence in Patient Safety

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- How can new and existing centers be created and supported to help carry out patient safety research?
  - 22 projects totaling \$8 million to foster innovative approaches to improving safety at facilities and organizations in diverse locations across the country

# Pilot Projects Selected

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## ■ Reporting

- Understanding norms of error disclosure
- Patient observation and medical errors
- Physician, staff, and patient reported errors (primary care)

## ■ Hospital

- Central venous line placement and nosocomial infections
- Cognitive task analysis of ICU care

## ■ Nursing home

- Reducing risk of falls/related injuries

## ■ Transitions

- Transitions in emergency care settings
- Transitional medical care management
- Reduce subsequent hospitalization following discharge



# Pilot Projects Selected

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## ■ Pediatrics

- Novel approach to pediatric safety
- Identifying and learning from NICU errors

## ■ Nursing

- Assessment/monitoring of harmful drug duplication and interaction
- Patient, family and RN perceptions of medication errors in home care
- ID system errors and causes by community-based care management by RNs

## ■ Other

- Factors associated w/safe telephone medicine
- Failure to follow-up abnormal mammograms
- Analyzing diagnostic errors
- Systems engineering intervention in outpatient surgery

# Using Computers and Information Technology to Improve Safety

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- How can computers and information technology be applied to reduce errors and improve quality of care?
  - 11 projects totaling \$5.3 million to develop and test state-of-the-art applications
    - hand-held computers with decision support systems
    - simulation tools to train clinicians and to identify and analyze errors and close calls/near misses
    - examine how to improve specific tools like eliminating errors in the use of infusion pumps

# Working Conditions and Patient Safety

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- What is the impact of working conditions in health care settings on patient safety?
  - 22 w/8 projects related to patient safety totaling \$3 million to examine issues such as staffing, fatigue, stress, and sleep deprivation and their relationship to medical errors
    - assessing the relationship between daily changes in the working conditions in hospital, including nurse staffing, ratios, workload, and skill mix
  - study issues that have been examined extensively in aviation, manufacturing, and other industries, but not in health care

# Effect of Health Care Working Conditions on Patient Safety\*

- Increased staffing of licensed and unlicensed nurses in acute and long-term care facilities likely leads to improved patient outcomes
- Preventable complications are fewer when complex technical procedures are completed by high-volume clinicians
- Systems to reduce interruptions/distractions likely reduce the number of medical errors
- Systems to improve information exchange and hand-offs of patients decrease medication errors and hospital readmissions

\*The effect of health care working conditions on patient safety. Evidence Report/Technology Assessment Number 74,(2003.)

# Disseminating Research Results

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- What are the best ways to educate clinicians and others about the results of patient safety research?
  - 6 projects totaling \$2.4 million to develop, demonstrate, and evaluate new approaches to improving provider education
    - applying new knowledge on patient safety to curricula development, continuing education, simulation models, and other training strategies

# ■ Patient Safety Task Force

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- A Cooperative activity of the DHHS
  - AHRQ, CDC, CMS, FDA
- Goal: improving existing federal reporting systems by “front end” and “back end” integration and enhancement
- Large project: National Patient Safety Network



# National Patient Safety Network (NPSN) Concepts

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## ■ Concepts

- Knowledge system for patient safety is essential
- Local user relevance is essential
- All participants should benefit
- Integrated system is essential
  - Includes state / federal required reports
  - Standardized methods / definitions
  - Compatible with existing systems
- Modular system is optimal
  - Evolution
  - Expansion

# Making Health Care Safer: A Critical Analysis of Patient Safety Practices

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- UCSF-Stanford EPC commissioned by AHRQ to review evidence on safety practices (released July 20, 2001)
  - Engaged 39 authors at 11 universities
  - Reviewed 3,000+ pieces of literature (from medicine, aviation, human factors, other fields)
- [www.ahrq.gov/clinic/ptsafety/](http://www.ahrq.gov/clinic/ptsafety/)
- Translating report to practice through the NQF (ongoing)
  - Develop a compendium of evidence-based safety practices useful in preventing/reducing health care errors

# AHRQ's Web M&M

- [www.webmm.ahrq.gov](http://www.webmm.ahrq.gov)
- Content
  - Analysis of cases submitted anonymously by readers
  - Interactive learning modules
  - Forum for on-line discussion
  - CME available

The screenshot shows the AHRQ Web M&M website. At the top is a navigation bar with links: ABOUT, REGISTER, SUBMIT A CASE, FORUMS, LINKS, AHRQ, and a search bar. Below the navigation bar is a header image with the text "web M&M Morbidity & Mortality Rounds on the Web" and a green ECG line. The main content area is divided into two columns. The left column is titled "Welcome to AHRQ WebM&M ..." and contains a paragraph about the site's purpose, a link to "Submitting a case is easy and anonymous", and a "SUBMIT A CASE" button. The right column is titled "Did you know ..." and contains two bullet points about computerized order-entry systems and CPOE systems, along with a source citation. Below these columns is a section titled "Current Cases & Commentaries" with a "FIND ANOTHER SPECIALTY" button. This section contains five columns for different medical specialties: MEDICINE, ANESTHESIA, PEDIATRICS, OB/GYN, and PSYCHIATRY. Each column lists a case title, a brief description, a "more..." link, and the commentator's name. At the bottom of the page, a footer states that WebM&M is produced under a contract from AHRQ, edited at the University of California, San Francisco (UCSF), and supported by DoctorQuality.

Agency for Healthcare Research and Quality **AHRQ** ABOUT | REGISTER | SUBMIT A CASE | FORUMS | LINKS | AHRQ search by keyword GO

**web M&M**  
Morbidity & Mortality  
Rounds on the Web

TERMS & CONDITIONS | PRIVACY POLICY | HELP

*Welcome to AHRQ WebM&M ...*

the online journal and forum on patient safety and health care quality. This site features expert analysis of medical errors reported anonymously by our readers, interactive learning modules on patient safety, and forum for online discussion.

*Submitting a case is easy and anonymous*  
Writers of cases chosen for posting receive an honorarium.

**SUBMIT A CASE**

*Did you know ...*

- there are 344 computerized order-entry systems approved by JCAHO
- there are 100 approved CPOE systems that have had no users

Source: Kleinke, Health Affairs, 1998

**Current Cases & Commentaries** **FIND ANOTHER SPECIALTY**

MEDICINE	ANESTHESIA	PEDIATRICS	OB/GYN	PSYCHIATRY
<b>Wet Read ER X-Rays</b> A dyspneic patient is treated for "massive PE" after a spiral CT is misread <a href="#">more...</a>	<b>Inappropriately Continued Orders</b> A post/op patient develops CHF when ICU hydration is not slowed upon ward transfer <a href="#">more...</a>	<b>Incorrect Units</b> A young child receives 50 milligrams of clonidine instead of the intended 50 micrograms <a href="#">more...</a>	<b>The Wrong Patient</b> A gynecology patient undergoes a cardiac procedure intended for another patient <a href="#">more...</a>	<b>Sound-alike Drug Names</b> A patient with bipolar disorder is given Zyprexa for urticaria instead of Zyrtec <a href="#">more...</a>
Commentary by Kaveh G. Shojania, MD	Commentary by John Roseboro, MD	Commentary by Samuel Jeulich, MD	Commentary by Randy Kutoher, MD	Commentary by Camille Brabant, MD

WebM&M is produced under a contract from [AHRQ](#). It is edited at the [University of California, San Francisco \(UCSF\)](#), guided by a prominent [Editorial Board](#) and [Advisory Panel](#). Technical and web support are provided by [DoctorQuality](#).

# ■ International Activities

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## ■ US/UK initiative

- AHRQ and UK(National Health Service)
- Methodology meetings
  - Iceland meeting (Sep. 8-10, 2002) -- Methodology issues related to “error reporting”
  - Rockville (Sep. 23-24, 2003) – Safety by Design
- Peer review of grant applications
- Participation in annual patient safety conferences

# FY 2003 AHRQ Patient Safety Investments

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- Patient Safety Improvement Corps
  - AHRQ/VA partnership
  - Primary goal: improve patient safety by providing essential knowledge and skills
  - When: 3 annual programs (3 weeks/program)
  - Where: initial program in Washington DC area
  - Who: States and their selected hospital partners
  - Cost: Free of charge to participating teams



# FY 2003 AHRQ Patient Safety Investments

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- Challenge grants
  - \$3,000,000
  - Design and evaluation
    - Not implementation
  - Complement work of CDC, CMS, FDA
    - Reduce medication errors
    - Reduce hospital acquired infections
    - Eliminate preventable procedure and device-related complications





# FY 2003 AHRQ Patient Safety Activities

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- Third annual patient safety conference
  - Build the bridge between researchers and users of research findings to improve patient safety
  - Showcase research products and findings that can be put into practice to influence and improve the safety of health care
  - March 7-9, 2004 – Arlington, VA
  - Attendees
    - AHRQ and HRSA patient safety grantees
    - Invited users
  - Includes domestic and international representation



# IOM Chasm Report: Information Technology

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- “There must be a renewed national commitment to building an information infrastructure to support health care delivery, consumer health, quality measurement and improvement, public accountability, clinical and health services research, and clinical education.”
- This commitment should lead to the elimination of most handwritten clinical data by 2010.

# 2004 Patient Safety Investments

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- Health Information Technology (HIT)
- \$50 million initiative to demonstrate hospital-based information technology solutions
- Foci
  - Assessing value
  - Planning
  - Implementation
- Emphasis
  - small community and rural hospitals



# Additional AHRQ Resources on Medical Errors and Patient Safety

- <http://www.ahrq.gov/qual/errorsix.htm>
- **Documents/Fact Sheets**
  - [Five Steps to Safer Health Care](#)
  - [20 Tips to Help Prevent Medical Errors: Patient Fact Sheet](#)
  - [20 Tips to Help Prevent Medical Errors in Children](#)
  - [Medical Errors: The Scope of the Problem](#)
  - [Medication Errors Found To Be Common in Pediatric Inpatients](#)
  - [Ways You Can Help Your Family Prevent Medical Errors!](#)
  - [Reducing Medical Errors in Health Care](#)
- **Audio tapes:** [Building the Business Case for Patient Safety](#)
- **Web-assisted teleconference proceedings:** [Can You Minimize Health Care Costs by Improving Patient Safety?](#)
- **Conference Synthesis:** [Agenda for Research in Ambulatory Patient Safety](#)